

Appl. No. 10/786,431
Docket No.: H1799-00201
Reply to Office Action of April 19, 2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. -3. (Canceled)

4. (Currently Amended) A thermal bus ~~according to claim 3~~
arranged within an electronics system for transporting thermal energy in a
directed manner comprising at least one loop thermosyphon comprising an
evaporator and a condenser that are interconnected in flow communication to
one another by one conduit comprising a pair of concentrically arranged tubes,
wherein said pair of concentric tubes comprises an inner tube and an outer tube
such that an annular void is defined between them so as to form a vapor
transport space, and further wherein said inner tube comprises a melt-
processable copolymer of tetrafluoroethylene.

5. (Currently Amended) A thermal bus according to claim 4 [[3]]
wherein said outer tube hermetically engages said condenser portion and said
evaporator portion and said inner tube engages said condenser portion and said
evaporator.

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6. (Original) A thermal bus according to claim 4 wherein said condenser portion comprises a vapor vessel and a liquid vessel.

7. (Original) A thermal bus according to claim 6 wherein said liquid vessel comprises a liquid header and a vapor plenum that are separated by a bulkhead.

8. (Original) A thermal bus according to claim 7 wherein said vapor plenum is in flow communication with said vapor vessel.

9. (Original) A thermal bus according to claim 7 further comprising a port that passes through said bulkhead.

10. (Currently amended) A thermal bus according to claim 4 [[3]] wherein:

said vapor transport space is in flow communication with said vapor vessel, said vapor plenum and said vapor conduit; and

said liquid header is in flow communication with said inner tube and a port.

11. (Original) A thermal bus according to claim 10 wherein said inner tube forms an interference fit with said port.

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12. (Original) A thermal bus according to claim 10 wherein said port comprises a nipple.

13. (Currently Amended) A thermal bus according to claim 4 ~~[[1]]~~ wherein said evaporator portion comprises a plurality of blade-evaporators that extend from a common manifold, wherein said common manifold is arranged in flow communication with each blade-evaporator and with said one conduit.

14. (Original) A thermal bus according to claim 13 wherein each blade-evaporator is joined to said common manifold so that vapor exits from each blade-evaporator to said common manifold and condensate is returned to said common manifold so as to be distributed to individual blade-evaporators.

15. (Original) A thermal bus according to claim 14 further comprising a vapor conduit hermetically engaged with said vapor plenum.

16. (Original) A thermal bus according to claim 15 further comprising a condensate conduit in flow communication with said liquid header.

17. (Currently Amended) ~~A thermal bus according to claim 16~~
loop thermosyphon comprising an evaporator and a condenser that are

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interconnected in flow communication to one another by one conduit comprising a pair of concentrically arranged tubes, wherein said evaporator portion comprises a plurality of blade-evaporators that extend from a common manifold and said common manifold is arranged in flow communication with each blade-evaporator wherein said one conduit and each blade-evaporator is joined to said common manifold so that vapor exits from each blade-evaporator to said common manifold and condensate is returned to said common manifold so as to be distributed to individual blade-evaporators, and further comprising a vapor conduit hermetically engaged with said common manifold and a condensate conduit in flow communication with said liquid header wherein said condensate conduit forms an interference fit with said fitting.

18. (Original) A thermal bus according to claim 17 wherein said fitting comprises a nipple.

19. (Canceled)

20. (Currently Amended) A thermal bus according to claim 21 ~~[[19]]~~ wherein said evaporator and condenser are spaced apart and separated by at least one structure.

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21. (Currently Amended) A thermal bus ~~according to claim 19~~
arranged within an electronics system for transporting thermal energy in a
directed manner comprising:
an evaporator and a condenser arranged in flow communication with one
another through a conduit comprising an outer tube and an inner tube that are
positioned in concentric relation to one another wherein said outer tube
comprises a pleated wall that is formed by a plurality of circumferential folds that
are arranged in parallel spaced relation to one another.

22. (Original) A thermal bus according to claim 19 wherein said
inner tube comprises at least one of Teflon FEP and Teflon PFA.